

Claims

1. A mobile communications device comprising:
a wireless transceiver comprising means for receiving at
5 least one of timing information and location information from
a cellular communications network, and
a second wireless transceiver comprising means for
transmitting said at least one of the said timing information
and location information to an adjacent GPS device.
- 10 2. A GPS device comprising:
a GPS receiver comprising means for receiving a GPS
signal;
a wireless transceiver comprising means for receiving
from an adjacent device at least one of timing information and
15 location information; and
a GPS positional estimator for providing a positional
estimate dependent on said received GPS signal and at least
one of the said timing information and location information.
- 20 3. A GPS device as claimed in claim 2, in combination with
said adjacent device, the adjacent device being a mobile
communications device, the mobile communications device
comprising a wireless transceiver comprising means for
receiving at least one of the said timing information and
25 location information from a cellular communications network.
4. A combination as claimed in claim 3, wherein the mobile
communications device further comprises a second wireless
communications transceiver comprising means for transmitting
30 said at least one of the said timing information and location
information to an adjacent GPS device.
5. A combination of the mobile communications device as
claimed in claim 1 and a GPS device, wherein the GPS device

comprises a GPS communications receiver for receiving a GPS signal.

6. A combination as claimed in claim 5, wherein the GPS
5 device further comprises a wireless transceiver for receiving the at least one of the said timing information and location information from the adjacent mobile communications device.

7. A combination as claimed in claim 6, wherein the GPS
10 device further comprises a GPS positional estimator for providing a positional estimate dependent on the received GPS signal and at least one of the said timing information and location information.

8. A combination as claimed in claims 3 to 7 wherein the GPS
15 device wireless transceiver further comprises means for directly transmitting said positional estimate to the mobile communications device.

9. A combination as claimed in claim 8 when appended to
20 claims 1 or 4 to 7 wherein the mobile communications device further comprises:

the second wireless transceiver comprising means for receiving the said positional estimate.

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10. A combination as claimed in claim 9, wherein the mobile device further comprises a display for displaying said received positional estimate to the user.

11. A combination as claimed in claims 9, wherein said mobile
30 communications device wireless transceiver is arranged to transmit the received positional estimates over said cellular communications network.

12. A combination as claimed in claims 3 to 11, wherein said communications device is arranged to provide a position estimate based on the at least one of the said timing
5 information and said location information.

13. A combination as claimed in claims 3 to 12, further comprising a memory, wherein said positional estimates are stored in said memory.

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14. A combination as claimed in claim 13 when appended to claims 3 to 7, wherein said mobile communications device wireless transceiver is arranged to transmit at least one of the positional estimates stored in said memory over said
15 cellular communications network.

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15. A combination as claimed in claims 4 or 6, wherein the GPS wireless transceiver and the mobile communications device second wireless transceiver are arranged to communicate between each other over an enhanced synchronised connection orientated (eSCO) communication channel.

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16. A combination as claimed in claims 4 and 6, wherein the GPS wireless transceiver and the mobile communications device second wireless transceiver are arranged to communicate between each other over a synchronised short range wireless communication channel.

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17. A combination as claimed in claims 4 and 6, wherein the GPS wireless transceiver and the mobile communications device second wireless transceiver are arranged to communicate between each other over a fixed delay short range wireless communication channel.

18. A combination as claimed in claims 16 and 17, wherein the communication channel is a Bluetooth communications channel.

19. A combination as claimed in claims 4 and 6, wherein the mobile communications device second wireless transceiver and the GPS wireless transceiver is at least one of:

- a Bluetooth transceiver;
- a IrDA transceiver;
- a IEE 802.11 transceiver.

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20. A combination as claimed in claim 4 and 6, wherein the at least the said timing information and location information comprises at least one of:

- a base transceiver station timing signal;
- a base transceiver station positional estimate.

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21. A combination as claimed in claims 3 to 30, wherein the GPS device further comprises a connector and the mobile communications device further comprises a connector, wherein the GPS device connector is physically connected to the mobile device connector.

22. A mobile communications device of claim 1 or a combination as claimed in claims 3 to 22 wherein the mobile communications device wireless transceiver is at least one of:

- a GSM transceiver;
- a WCDMA transceiver;
- a UMTS transceiver;
- a CDMA2000 transceiver.

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23. A GPS device as claimed in claim 2 or a combination as claimed in claims 3 to 21 further comprising an indicator, said indicator comprising at least one of:

- at least one LED;
- 5 a buzzer.

24. A GPS device as claimed in claim 2 or a combination as claimed in claims 3 to 21, further comprising a switch arranged to switch said GPS device on and off.

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25. A GPS device as claimed in claim 2 or a combination as claimed in claims 3 to 21, further comprising a battery arranged to provide a power source for said GPS device.

15 26. A method of providing a GPS estimate comprising the steps of:

- receiving a GPS signal on a GPS device;
- receiving at least one of timing information and location information from a cellular communications network on an
- 20 mobile communications device, the mobile communications device being located at substantially the same location as the GPS device;
- producing a further signal dependent on the said timing information and location information signal;
- 25 transmitting the further signal over a wireless communications link to the GPS device;
- determining a positional estimate dependent on the received GPS signal and the third signal on the GPS device

30 27. A method as claimed in claim 24 further comprising the step of transmitting said determined positional estimate over the wireless communications link to the mobile communications device.

28. A method as claimed in claim 27 further comprising the steps of:

receiving the positional estimate on the mobile communications device via said wireless communications link;

5 displaying the received positional estimate on the mobile communications device.

29. A method as claimed in claim 27 or 28, further comprising the steps of;

10 storing the received positional estimate in a memory;

transmitting the stored positional estimate over the cellular communications network.